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| 10/609,490  | 06/25/2003  | Shih-Jong J. Lee     | SV28                | 1734             |
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| SHIH-JONG J. LEE<br>15418 SE 53RD PLACE<br>BELLEVUE, WA 98006 |             |                      | MYINT, DENNIS Y     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2162                |                  |

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/609,490

Applicant(s)

LEE, SHIH-JONG J.

Examiner

Dennis Myint

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 06/25/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-30 have been examined.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 21 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 cites the limitation "from the both the correct labels and the wrong label population" in Line-2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 cites the limitation "from the correct labels and the wrong label " in Line-2-3. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 2162

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 and 5-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Heytens et al. (U.S. Patent Application Publication Number 2003/0220860).

As per claim 1, Heytens et al. is directed to a system and method for an integrated human and computer interactive data mining, comprising the steps of:

a) Input a database (Figure 1 "ODS"(Operational Data Store) 106 and Paragraph 0058);

b) Perform knowledge creation selected from the group consisting of learning, modeling, and analysis using the database to create an initial knowledge model (Paragraph 0074 and 0085+);

c) Perform at least one query (inputs) of the initial knowledge model (Paragraph 0092-0094);

d) Perform visualization processing of the initial knowledge model to create a knowledge presentation output (Paragraph 0081, 0134-0151, and 0095).

As per claim 5, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 1, which further comprises a feedback and update request step that updates the initial knowledge model (Paragraph 0091-0094 and 0085). Particularly note the functions of "scoring engine" and "model input calculation engine" in said paragraphs of Heytens et al.'s specification.

Claim 13 is rejected on the same basis claim 5.

As per claim 6, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 1 wherein the knowledge creation step further comprises the steps of:

- a) perform data organization using the database to create formatted data ("preparing the data") (Paragraph 0079);
- b) perform data modeling using the formatted data to create the initial knowledge model (Paragraph 0085+).

As per claim 7, Heytens et al. is directed to an integrated human and computer interactive data mining method comprises the steps of:

- a) input a database (Figure 1 "ODS"(Operational Data Store) 106 and Paragraph 0058);
- b) perform knowledge creation selected from the group consisting of learning, modeling, and analysis using the database to create an initial knowledge model (Paragraph 0074 and 0085+);
- c) perform dynamic learning and knowledge representation using the initial knowledge model and the database to create or update a presentable knowledge model (Paragraph 0085+ and Paragraph 0091-0094) ;

As per claim 8, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 7, which further comprises an interactive data mining step between the human and the presentable knowledge model (Paragraph 0198, 0091-0094, and 0085).

As per claim 9, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 7 wherein the dynamic learning and knowledge representation step further comprises an update learning step (Paragraph 0085+ and Paragraph 0091-0094).

As per claim 10, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 7 wherein the knowledge creation step further comprises the steps of:

a) perform data organization using the database to create formatted data ("preparing the data") (Paragraph 0079);

b) perform data modeling using the formatted data to create the initial knowledge model (Paragraph 0085+).

As per claim 11, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 8 wherein the interactive data mining step further comprises a visualization step (Paragraph 0081, 0134-0151, and 0095).

As per claim 12, Heytens et al. is directed to the integrated human and computer interactive data mining method of claim 8 wherein the interactive data mining step further comprises a query step ("inputs")(Paragraph 0092-0094).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2162

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Berry (Michael J. A. Berry, "Data Mining Techniques", Wiley, P-243-285).

Referring to claim 2, Heytens et al. teaches the system and method as applied to claim 1 above but fails to disclose that the initial knowledge mode is a regulation tree. However, Berry teaches the use of a regulation tree (decision tree), which determines statistics from the training samples for at least one non-terminal node (Berry P-252-254).

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to make use of a regulation tree in data mining modeling as in the method of claim 1. One would have been motivated to do so because statistical techniques provide useful tools to assess performance of data mining techniques.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Perrizo (U.S. Patent Number 6941303).

Referring to claim 3, Heytens et al. teaches the system and method as applied to claim 1 above but fails to disclose that the knowledge presentation output further comprises rule ranking by information integration. However, Perrizo teaches rule

Art Unit: 2162

ranking in data mining wherein rules are ranked based on several factors (Column 17 Line-28 through Column 22 Line-46).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art combine the method of rule ranking as taught by Perrizo with the system and method taught by Heytens et al. as applied to claim 1 so that, in the combined method, the knowledge presentation output would further comprise rule ranking by information integration. One would have been motivated to do so in order to "organize the large amounts of data into an efficiently usable form that facilitates quick computer retrieval, interpretation, and sorting entire dataset or subset" (Perrizo, Column 1 Line-62-67).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Bay (Stephen D. Bay, "Multivariate Discretization of Continuous Variables for Set Mining", Proceedings of the Sixth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, August 2000).

Referring to claim 4, Heytens et al. teaches the system and method as applied to claim 1 above but fails to disclose that the knowledge presentation output includes feature distribution profiles. However, Bay teaches a method for generating feature distribution in data mining (Bay, P-316, Column 1, Line-6-35 and Page 317, Column 1, Line-32-45).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the method taught by Bay for generating feature

Art Unit: 2162

distribution in data mining with the system and method taught by Heytens et al. as applied to claim 1 so that, in the resultant method, the knowledge presentation output would include feature distribution profiles. One would have been motivated to do so in order to "find previously unknown and insightful pattern in data". (Bay, Page-315, Column 2, Line-21-23).

8. Claim 14-16 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Arning et al. (U.S. Patent Application Publication Number 2001/0054034).

The method of Heytens et al. as applied to claim 7 discloses an integrated human and computer interactive data mining method comprises the steps of:

a) input a database (Figure 1 "ODS"(Operational Data Store) 106 and Paragraph 0058);

b) perform knowledge creation selected from the group consisting of learning, modeling, and analysis using the database to create an initial knowledge model (Paragraph 0074 and 0085+);

c) perform overview (Paragraph 0058-0061, "The cluster-aware RDBMS is able to support the functions of an ODS containing current-valued, subject-oriented, and integrated data reflecting the current state of the systems that feed it ", Paragraph 0059) interactive data mining and dynamic learning and knowledge representation using the initial knowledge model and the database to create or update a presentable knowledge model (Paragraph 0085+ and Paragraph 0091-0094) .

Art Unit: 2162

Heytens et al. does not explicitly recite that the method performs at multiple levels. However, Arning et al. teaches the use of a zoom and filter feature in managing multi-dimensional databases (Arning et al, Paragraph 0108+). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add said zoom and filter feature to the system and method taught by Heytens et al. as applied to claim 7 so that said system and method would further perform at multiple levels. One would have been motivated to do so in order to obtain a simple, well-integrated interface designed for multidimensional analysts" (Arning et al., Paragraph 0108).

Claim 30 is rejected on the same basis as claim 14.

Referring to claim 15, the system and method of Heytens et al. in view of Arning et al. as discussed above with regard to claim 15 discloses the invention as claimed. Arning et al. teaches the use of a zoom and filter feature in managing multi-dimensional databases (Arning et al, Paragraph 0108+).

Referring to claim 16, the system and method of Heytens et al. in view of Arning et al. as discussed above with regard to claim 15 discloses the invention as claimed. Heytens et al. in view of Arning et al. discloses the method of claim 16 wherein details-on-demand is performed ("drilling down") (Arning et al. Paragraph 0063).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Chang et al. (U.S. Patent Application Publication Number 2004/0125877).

Heytens et al. as applied to claim 10 disclose the method of claim 17 except that Heytens et al. does not explicitly recite that the method performs at multiple levels. However, Chang et al. teaches a method wherein a decision tree is used at multiples (Chang et al., Paragraph 0098).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the multi-level decision tree as taught by Chang et al. with the system and method taught by Heytens et al. as applied in claim 10 so the combined system and method would be a multi level integrated human and computer interactive data mining method. One would be motivated to do so simply because it would enable one to make adjustments at all levels of data mining.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Perrizo and further in view of Bay.

Heytens et al. in view of Perrizo as applied to claim 3 above is directed to a presentable knowledge model generation method, which comprises the steps of:

a) input formatted data and a decision tree (Heytens et al., Paragraph 0087-0088);

b) perform rule ranking using the formatted data and the decision tree to create ranked output (Perrizo, Column 17 Line-28 through Column 22 Line-46);

However, Heytens et al. in view of Perrizo fails to explicitly teach that said method performs feature generation and groups the ranks. Bay, on the other hand,

Art Unit: 2162

teaches performing feature generation and grouping the ranks and feature profiles (Bay, P-316, Column 1, Line-6-35 and Page317, Column 1, Line-32-45).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine Bay's method for generating and grouping ranks and profiles with the method of Heytens et al. in view of Perrizo so that the combined method would input formatted data and a decision, perform rule ranking, and generate and group ranks and profiles for presenting to the user. One would have been motivated to do so in order to "find previously unknown and insightful pattern in data". (Bay, Page-315, Column 2, Line-21-23).

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Perrizo, further in view of Bay, and further in view of Pea et al. (U.S. Patent Application Publication Number 2004/0125148).

The system and method taught by Heytens et al. in view of Perrizo and further in view of Bay as applied to claim 18 above does not explicitly recite creating contrasting examples and grouping contrasting examples, ranks, and feature profiles for output. However, Pea et al. teaches a method for grouping (organize) data from more than one source wherein comparing and contrasting similar scenes from different movies (Pea et al. Paragraph 0041 and Figure 3).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the method of Pea et al. for creating contrasting examples and grouping data from different sources with the method taught by Heytens

Art Unit: 2162

et al. in view of Perrizo and further in view of Bay as applied to claim 18 above so that the combined method would create contrast examples and group the contrast examples, ranks, and feature profiles to create a presentable knowledge model output. One would have been motivated to do so simply because the user will be presented with intuitive and understandable representation of the data mining model.

12. Claim 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Perrizo, further in view of Bay, further in view of Pea et al., and further in view of Savasere et al. (Ashok Savasere, Edward Omiecinski, and Shamkant Navathe, "An Efficient Algorithm for Mining Association Rules in Large Databases " Proceedings of the 21<sup>st</sup> VLDB Conference, Zurich, Switzerland, 1995).

Referring to claim 20, the system and method taught by Heytens et al. in view of Perrizo and further in view of Bay as applied to claim 18 above does not explicitly teach that rule ranking is based on global characteristics and population characteristics selected from the set consisting of local counts, global counts, local population statistics, and global population statistics. However, Savasere et al. teaches a method for data mining association rules in large databases wherein rules are discovered based on global characteristics and population characteristics (Savasere et al., Page-436 Column 2, Line1 through Page-437 Column-1, Line-16) from the set consisting of

a) Local counts (Savasere et al., Page-438 Column 1, Line-21-34);

b) Local population statistics (Savasere et al., Page-436 Column 2, Line1 through Page-437 Column-1, Line-16);

c) Global counts (Savasere et al., Page-436 Column 1, Line-31-46);

d) Global population statistics (Savasere et al., Page-436 Column 2, Line1 through Page-437 Column-1, Line-16).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the method of Savasere et al. with the method of Heytens et al. in view of Perrizo and further in view of Bay as applied to claim 18 above so that, in the combined method, rule ranking will be based on global characteristics and population characteristics. One would have been motivated to do so in order to "reduce the CPU and I/O overheads" thus rendering the rule discovering being "suitable for very large size databases" (Savasere et al., Page-432 Column 1, Line-1-22).

Referring to claim 21, the system and method of Heytens et al. in view of Perrizo, further in view of Bay, further in view of Pea et al., and further in view of Savasere et al. as discussed above with regard to claim 20 discloses the invention as claimed. Heytens et al. in view of Perrizo, further in view of Bay, further in view of Pea et al., and further in view of Savasere et al. discloses that the contrast examples are the high rank samples from both the correct label (candidates) and the wrong label (false candidates) population. (Savasere et al., Page-436 Column 1, Line-14 through Page-437 Column 2, Line-17).

13. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Perrizo, further in view of Bay, and further in view of Knight (U.S. Patent Application Publication Number 2005/0171948).

The method of Heytens et al. in view of Perrizo and further in view of Bay as applied to claim 18 above discloses computer-generated decision tree modeling but fails teach that the feature profile generation method normalizes the automatically generated features. However, Knight teaches a method for identifying critical features wherein features are normalized (Knight, Paragraph 0066).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the method of Knight for feature normalization with the method of Heytens et al. in view of Perrizo and further in view of Bay as applied to claim 18 above so that, in the combined method, the feature profile generation method would normalize the automatically generated features. One would have been motivated in order to simply generate the presentation of data.

14. Claim 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Birdwell et al. (U.S. Patent Number 5481649).

A tree update learning method taught by Heytens et al. as applied to claim 7 above comprises the steps of input formatted data and decision tree but fails to disclose the step for removing a sample. However, Birdwell et al. teaches a system and method for using a decision tree in an adjunct system cooperating with another physical system, wherein an sample (example) is removed by subtracting the data (Birdwell et al., "example attributes", Line-60-61) from the sample associated with the terminal node and updating the statistics of each of the associated non-terminal nodes (Birdwell et al., Column 7 Line-3 through Column 8 Line-42).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the method of Birdwell et al. for updating decision trees with the method of Heytens as applied to claim 7 so that the resultant method would comprise the step of removing a sample by subtracting the data from the sample associated terminal node and updating the statistics of each of the associated non-terminal nodes. One would have been motivated to do so in order to "improve a decision tree that has improved performance as compared to the currently active decision tree" (Birdwell et al., Column 2, Line-24-26).

Claim 25 is rejected on the same basis as claim 23.

15. Claim 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Birdwell et al. and further in view of Edwards et al. (U.S. Patent Number 6549521).

Referring to claim 24 and 26, the tree update learning method taught by Heytens et al. in view of Birdwell et al. as applied to claim 23 above does not recite that the method comprises a step for removing or adding a rule. However, Edwards et al. teaches methods for adding a rule to a decision tree (Edwards et al. Column 5 Line-3+) and removing a rule from a decision tree (Edwards et al. Column 11 Line10+).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature for adding/removing rules to a decision tree as taught by Edwards et al. to the method of Heytens et al. in view of Birdwell et al. as applied to claim 23 above so that the resultant method would comprise a step for

Art Unit: 2162

removing/adding a rule to a decision tree. One would have been motivated to do so in order to "have a decision tree system which permitted incremental changes" (Edwards et al., Column 1 Line-55-62).

16. Claim 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Keim (Daniel A. Keim, "Information Visualization and Visual Data Mining", IEEE Transactions on Visualization and Computer Graphics, Vol. 7, No. 1, January-March 2002).

The method of Heytens et al. as applied to claim 7 above does not teach the parallel coordinate visualization technique that maps a multiple dimensional space onto two display dimensions and at least one item is presented as a polygonal line. However, Keim teaches such a technique (Keim, Page-101 Column 1, Line-48-53 and Page102 Column 1, Line-18-46).

At the time the invention was made, it would be obvious to a person of ordinary skill in the art to apply the parallel coordinate visualization technique as taught by Keim to the interactive data mining method taught by Heytens et al. as applied to claim 7 so that the resultant method would comprise the steps of inputting a presentable knowledge mode and performing rule viewing of a terminal node by said technique. One would have been motivated to do so in order that "the user is directly involved in the data mining process" (Keim, Page-100 Column 1, Line-1-16).

Art Unit: 2162

17. Claim 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Keim and further in view of Alqallaf et al. ( Fatemah A. Alqallaf, Kjell P. Konis, R. Douglas Martin, and Ruben H. Zamar, "Scalable Robust Covariance and Correlation Estimates for Data Mining", Proceedings of the eighth ACM SIGKDD international conference on Knowledge discovery and data mining", ACM Press, July 2002).

Referring to claim 28, the method of Heytens et al. in view of Keim as applied to claim 27 above does not disclose that said method shows the histograms of the features as encoded bars. However, Alqallaf et al. discloses a method for representing data using a histogram with a bar (Alqallaf et al., Page 21, Figure 7).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the to combine the use of histograms with bars as taught by Alqallaf et al. with the method of Heytens et al. in view of Keim as applied to claim 27 above so the combined method would show the histograms of the features as encoded bars. One would have been motivated to do so simply because data visualization such as that using histograms helps the user understand the whole scope of the data mining process.

18. Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Heytens et al. in view of Keim and further in view of Kemp et al. (U.S. Patent Application Publication Number 2003/0236795).

Referring to claim 29, the method of Heytens et al. in view of Keim as applied to claim 27 above does not disclose that said method highlights the representative samples from the correct label and wrong label. However, Kemp et al. teaches a method for identifying objects wherein primitives are highlighted (Kemp et al., Figure 6 and Paragraph 0091).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the method for highlighting objects as taught by Kemp et al. to the method of Heytens et al. in view of Keim as applied to claim 27 above so that the resultant method would comprise a contrast presentation method that highlights representative samples from the correct label and wrong label. One would have motivated to do so simply to stress the contrasting features.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

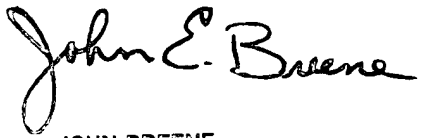
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2162

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint

AU-2162

  
JOHN BREENE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER

BC